蝶と蛾 *Trans. lepid. Soc. Japan* **55** (2): 76–82, March 2004

Two new subspecies of *Thyas miniacea* (Lepidoptera, Noctuidae, Catocalinae) from Sulawesi and the Philippines

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Abstract Two new subspecies of *Thyas miniacea* (Felder & Rogenhofer, 1874) are described from Sulawesi and the Philippines.

Key words *Thyas*, *Thyas miniacea*, *Thyas miniacea regia*, *Thyas miniacea sulawesiensis* ssp. n., *Thyas miniacea philippensis* ssp. n., *Thyas honesta*, Sulawesi, Philippines, female genitalia, taxonomy.

Thyas miniacea (Felder & Rogenhofer, 1874) is widely distributed from Samoa to the Lesser Sunda Islands (Robinson, 1975; Holloway, 1979), and divided into three subspecies. The nominotypical subspecies, *miniacea*, inhabits Fiji, Samoa and New Hebrides, ssp. *regia* Lucas, 1894 ranges from the Solomons to the Moluccas including New Guinea and its associated islands and Australia (Northern Territory, Queenland), and ssp. *rubrior* Holloway, 1979 is distributed on New Caledonia. Holloway (1979) stated that specimens from New Hebrides are intermediate between ssp. *rubrior* and nominotypical *miniacea*, being somewhat closer to the former. The specimens from Sulawesi and the Philippines before me are superficially different from each other, and through my close comparison, it turns out that both differ from the known subspecies of *mimiaceae*. On the other hand, a closely allied species, *T. honesta* Hübner, 1824, ranges over the continental part of SE Asia and in the Sundaland, and I was aware of the fact that it is also distributed in Sulawesi. In this paper, I describe two new subspecies of *T. miniacea* from Sulawesi and the Philippines respectively.

Thyas miniacea sulawesensis ssp. n. (Figs 1–3, 19, 23)

♂. Length of forewing 43–46 mm, expanse 82–90 mm. ♀. Length of forewing 43–44 mm, expanse 77–84 mm.

Forewing bright ochre to dark brown in male, dark brown in female; antemedian line indistinct; reniform represented by two black spots, of which upper one is reduced to a point and lower one is laterally enlarged and very developed; postmedian line strongly oblique from costa to vein 5, then slightly incurved. Hindwing reddish brown; a submarginal black marking broad and well developed in male, generally not so developed in female. Underside of both wings bright ochre, reddish brown or dark brown.

Holotype. ♂, Indonesia, C. Sulawesi, near Poso, Mt Sampuraga, xii, 1994, now in coll. H. Fukuda, will be preserved in the collection of Laboratory of Insect Systematics, National Institute of Agro-Environmental Sciences, Tsukuba. Paratypes. 5 ♂3 ♀, the same locality as holotype, xii. 1994, vii. 1998. 2 ♀, C. Sulawesi, Mamasa, vi. 2000; 2 ♂, C. Sulawesi, Palu, vii. 1998; 2 ♂, C. Sulawesi, near Watambayoli, Mt Tambusisi, vii. 1998. All the paratypes are in coll. H. Fukuda.

Distribution. Sulawesi.

Remarks. The new subspecies is characterized in the forewing markings by the strongly

oblique postmedian line in the anterior part, the reduced black point in the upper part of reniform and the laterally elongated black spot in the lower part of the reniform.

***Thyas miniacea philippensis* ssp. n.** (Figs 4–6, 20, 24)

♂. Length of forewing 40–45 mm, expanse 83–90 mm. ♀. Length of forewing 34–44 mm, expanse 67–82 mm.

Forewing reddish brown; antemedian line distinct; reniform represented by two black spots, of which the lower one is about twice as large as the upper one; postmedian line straight, nearly vertical to hind margin, and coming closer to antemedian line. Hindwing reddish brown, with a submarginal black marking well developed and broadened beyond cell. Underside of both wings reddish ochre or brown.

Holotype. ♂, Philippines, Panay Is., ii. 1996, now in coll. H. Fukuda, will be preserved in the collection of Laboratory of Insect Systematics, National Institute of Agro-Environmental Sciences, Tsukuba. Paratypes. 7 ♂ 2 ♀, the same data as holotype. All the paratypes are in coll. H. Fukuda.

Distribution. Philippines, Panay Is.

Remarks. The new subspecies is most similar to ssp. *regia* in the position of the postmedian line of the forewing, but is distinguished from the latter by the straighter postmedian line, which is nearly vertical to the hind margin, while in *regia* the postmedian line is slightly incurved and reaches the hind margin a little obliquely.

Thyas miniacea regia Lucas, 1894 (Figs 11–18, 21, 25)

Thyas miniacea regia Lucas, 1894, *Proc. Linn. Soc. N. S. Wales* (2) **8**: 151.

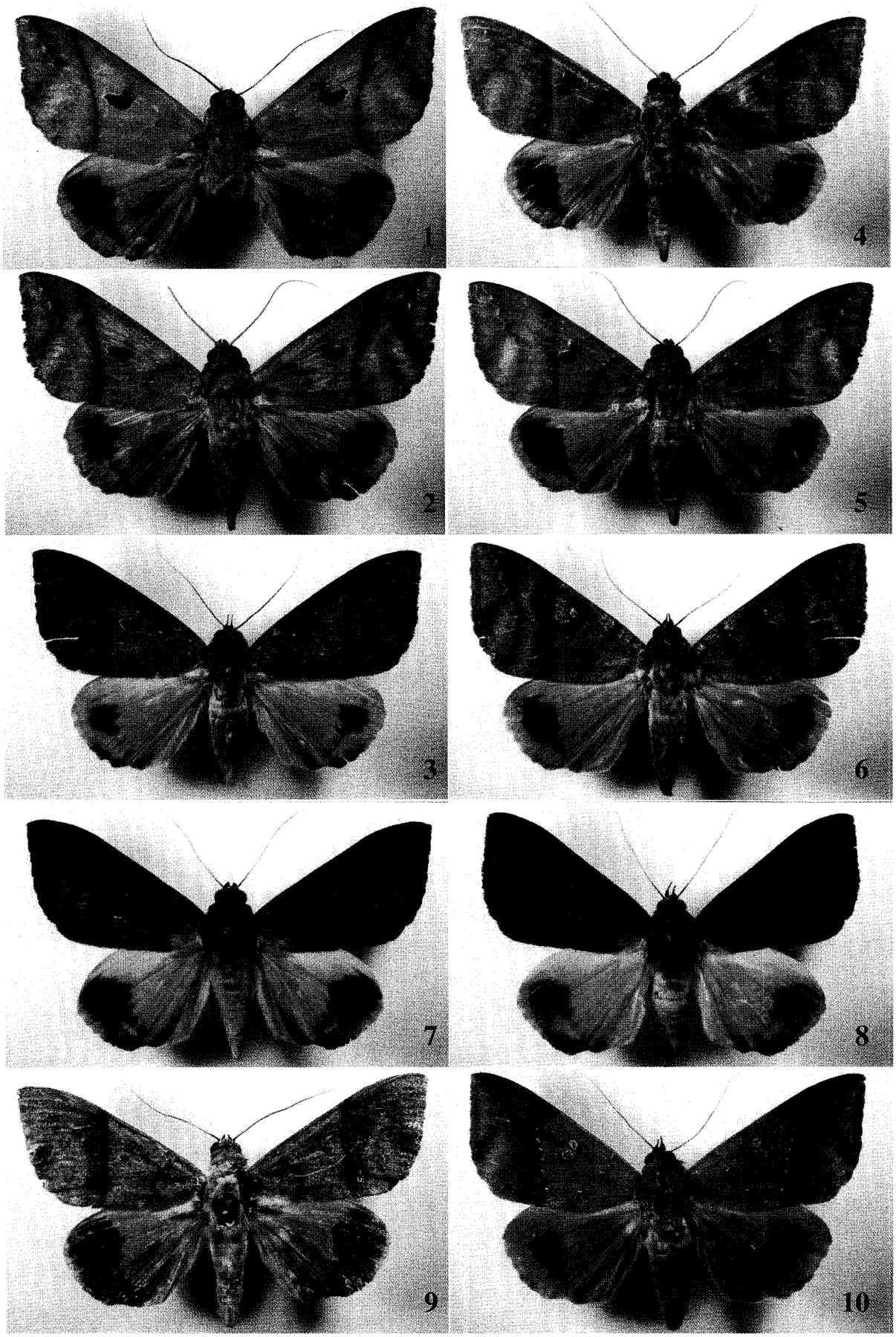
Forewing ochre or dark brown in male, blackish brown or ochre in female; the antemedian line usually distinct; the black spots on reniform often disappearing or replaced by irregular white markings; the postmedian line usually slightly incurved and a little oblique to hind margin. Hindwing reddish brown, with a submarginal black marking usually well developed.

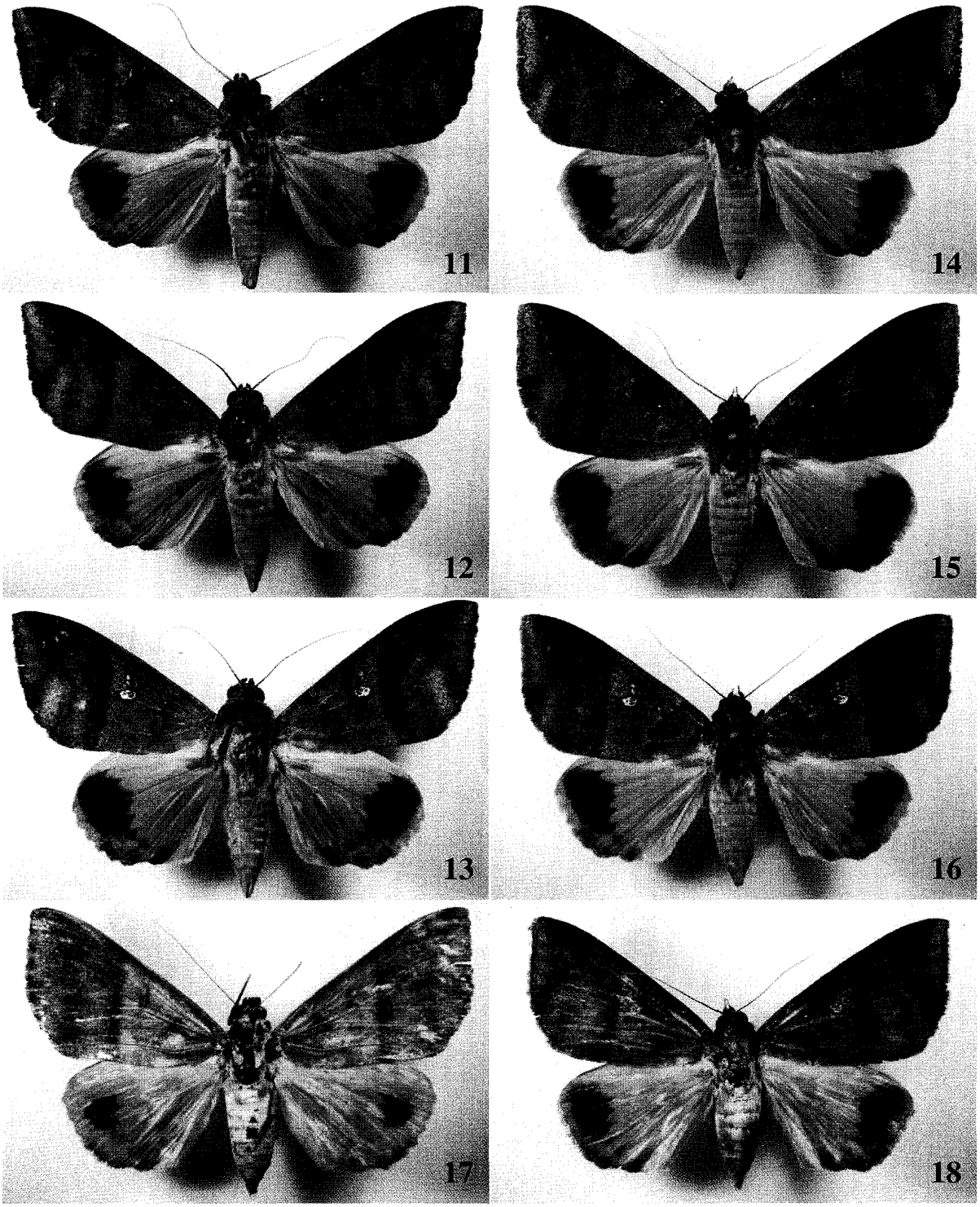
Material examined. 22 ♂ 17 ♀, W. Irian, Wamena, Pass Valley, iii. 2000; 1 ♀, New Ireland Is., iii. 1999; 1 ♀, Duke of York Is., ix. 2001; Papua New Guinea. These specimens are in coll. H. Fukuda.

Remarks. This subspecies seems very variable in the wing markings, and is often difficult to separate from the nominotypical subspecies (Figs 7–8). A female from Duke of York Is. (Fig. 17) has the hindwing submarginal black marking very reduced, showing some resemblance to ssp. *rubrior*, and a female from New Ireland Is. (Fig. 18) has a typical *regia* wing pattern. Five males from Tanna Is., New Hebrides (Fig. 9), which is included in the range of the nominotypical subspecies, have a very wide submarginal black marking despite Holloway's (1979) comments on the New Hebrides specimens.

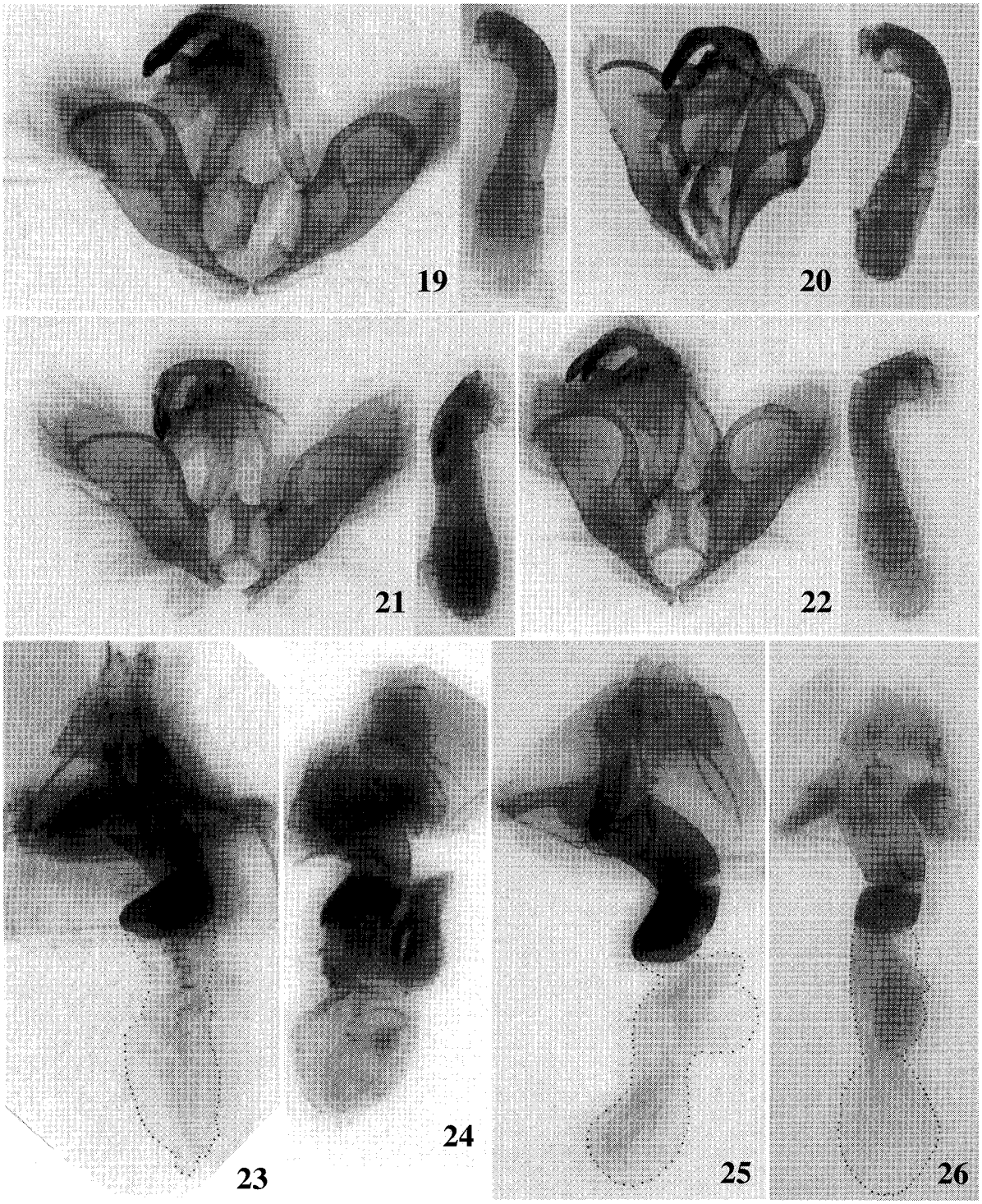
Thyas honesta Hübner, 1824 (Figs 10, 22, 26)

Material examined. 1 ♀, C. Sulawesi, Mamasa, vi. 2001; 1 ♀, Bali Is., xii. 1999; 2 ♀, N. Sumatra, Sidikalang, iv. 1987; 1 ♀, N. Sumatra, Brastagi, v. 1995; 2 ♂ 1 ♀, Philippines, Panay Is.; 2 ♂, Japan, Iriomote Is., 6. vi. 1994; 1 ♂ 1 ♀, N. Vietnam, Tam Dao, v. 1999; 1 ♂ 4 ♀, N. Thailand, Chiang Mai, 3. i. 2001; 1 ♂ 1 ♀, N. Thailand, Chiang Rai, Wiang Papao,

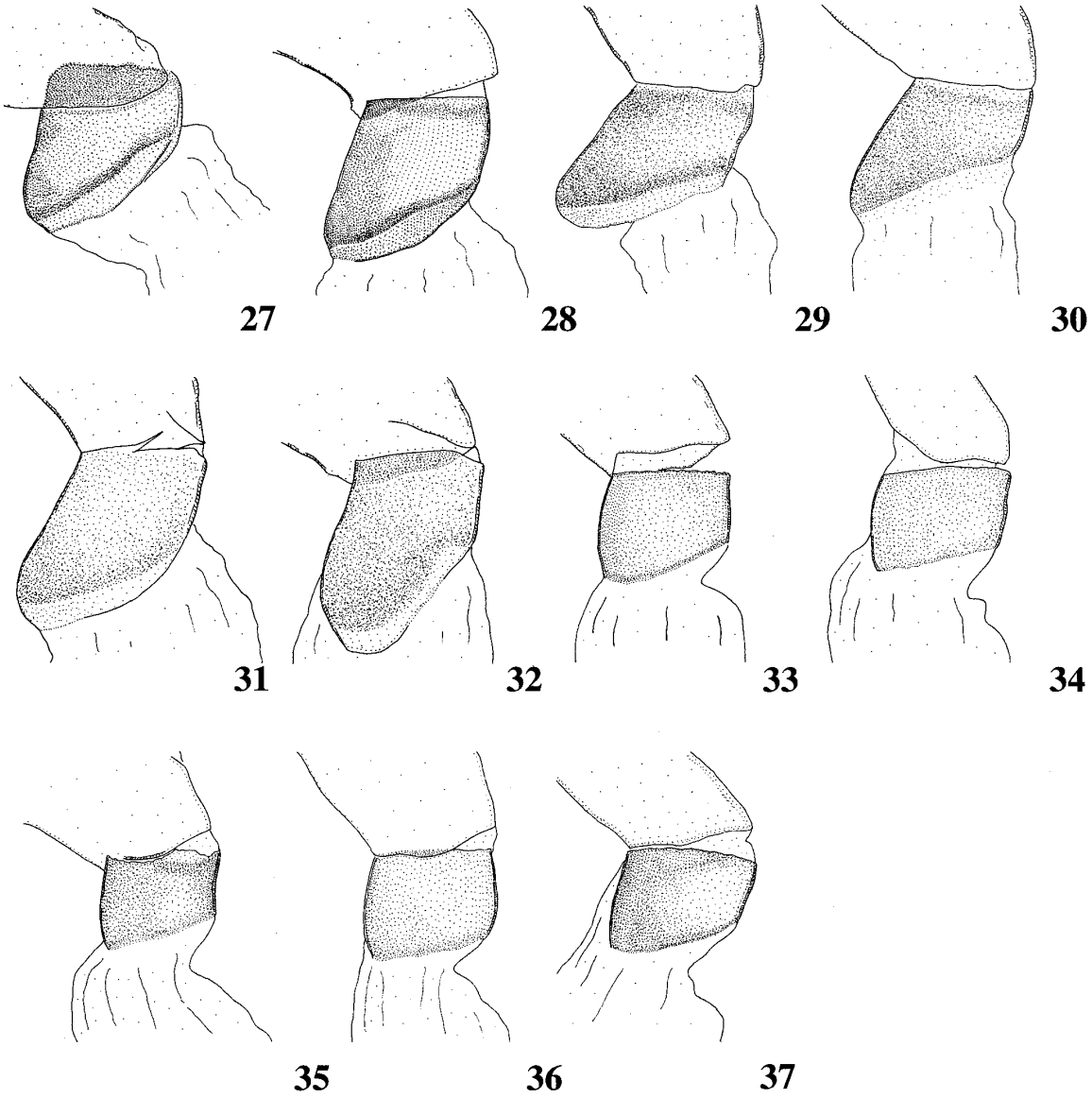




Figs 1–18. *Thyas miniacea* subspp. and *T. honesta*. 1–3. *T. m. sulawesensis* ssp. n. (1: ♂, holotype, 2: ♂, paratype, 3: ♀, paratype). 4–6. *T. m. philippensis* ssp. n. (4: ♂, holotype, 5: ♂, paratype, 6: ♀, paratype). 7–8. *T. m. miniacea* (Felder & Rogenhofer), Fiji (7: ♂, 8: ♀). 9. *T. m. miniacea*?, Tanna Is., ♂. 10. *T. honesta* Hübner, Sulawesi, ♀. 11–16. *T. m. regia* Lucas, Irian Jaya, Wamena (1–13: ♂, 14–16: ♀). 17. *Ditto*, Duke of York Is., ♀. 18. *Ditto*, New Ireland Is., ♀.



Figs 19–26. Male (Figs 19–22) and female (Figs 23–26) genitalia of *Thyas miniacea* subspp. and *T. honesta*. 19. *T. m. sulawesensis* ssp. n., holotype. 20. *T. m. philippensis* ssp. n., paratype. 21. *T. m. regia* Lucas, Irian Jaya, Wamena. 22. *T. honesta* Hübner, Japan, Iriomote Is. 23. *T. m. sulawesensis* ssp. n., paratype. 24. *T. m. philippensis* ssp. n., paratype. 25. *T. m. regia* Lucas, Irian Jaya, Wamena. 26. *T. honesta* Hübner, Sumatra.



Figs 27–37. Discriminating points of the female genitalia (posterior part of corpus bursae) of *Thyas* spp. 27–32. *T. miniacea* (27–28: ssp. *sulawesensis* ssp. n.; 29–30: ssp. *philippensis* ssp. n.; 31: ssp. *regia* from Irian Jaya, Wamena; 32: ssp. *regia* from Duke of York Is.). 33–37. *T. honesta* from various localities (33: Sulawesi; 34: Philippines, Panay Is.; 35: Bali Is.; 36: Sumatra; 37: N. Thailand).

i. 1996. These specimens are in coll. H. Fukuda.

Remarks. This species is widely distributed in SE Asia including the Philippines (Semper, 1900; Hampson, 1913), but has so far been not recorded from Sulawesi. The Philippines and Sulawesi are here for the first time indicated as areas in which both *miniacea* and *honesta* are distributed.

In appearance, *T. honesta* and *T. miniacea* are well separable by the pattern of the postmedian and submarginal lines of the forewing. In *honesta*, the trace of the postmedian line is excurved beyond the cell and the submarginal line is nearly straight from the apex to vein 5. In spite of these visible differences, the two species are very similar to each other in

genitalia especially in the male (Figs 19–22), and I only found slight differences in the female genitalia, where the shape of the posterior sclerotized area of the corpus bursae is nearly quadrate in the ventral view in *T. honesta* (Figs 26, 33–37), while in *T. miniacea* it is obliquely more elongate (Figs 23–25, 27–32).

Acknowledgements

In writing this paper, I express my thanks to Mr H. Yoshimoto, Tokyo High School, for his kind advice. My sincere thanks are due to Messrs Y. Nishiyama, Tokyo, T. Endo, Tokyo, and N. Katsura, Tokyo, for their kind provision of invaluable specimens.

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摘　　要

スラウェシ, フィリピン産のシタベニコノハ, *Thyas miniacea* (Felder & Rogenhofer), の2新亜種 (福田　宏樹)

Thyas miniacea (Felder & Rogenhofer, 1874) はフィジー, サモア, ニューヘブリデス諸島に原名亜種を産し (Robinson, 1975), ニューカレドニアに亜種 *ruburior* Holloway, 1979, 小スンダ列島, モルッカ諸島, ニューギニア, オーストラリア (ノーザン・テリトリー, クイーンズランド), ビスマーク諸島, ソロモン諸島に亜種 *regia* Lucas, 1894 が知られている (Holloway, 1979). 原名亜種とされるニューヘブリデス諸島の個体群について2頭を検した Holloway (1979) によると, 亜種 *rubrior* と亜種 *miniacea* の中間的な特徴を示すという. しかし, 筆者の手元にあるタンナ島産の5♂の個体は後翅表面の黒色紋が著しく発達し, 原名亜種とは異なる. 将来, 別亜種になるかも知れない. デューク・オブ・ヨーク諸島産の1♀ (Fig. 13) は後翅表面の黒色紋の発達が大変弱く, 一見亜種 *rubrior* に似る特異な個体であるが, ニューアイルランド島の個体は典型的な *regia* の特徴を示しており, 個体変異と推定される. 筆者は今まで記録の無かったスラウェシとフィリピン産の本種の標本を入手し既知亜種と比較した. その結果, スラウェシの個体群は, 内横線が不明瞭, 腎状紋の下部が例外なく非常に発達する, 弓状の外横線の角度が既知亜種と異なる, 後翅表面の黒色紋の発達が弱いこと等で既知亜種と異なり, また, フィリピンの個体群は, 内横線が明瞭, 腎状紋が発達する, 外横線が既知亜種と異なり雌雄とも直線的になる, 内横線と外横線が内縁で非常に接近する, 後翅表面の黒色紋が発達する等, 特異なものであることが分かった. 以上の点からスラウェシ産およびフィリピン産は, それぞれ新亜種と認められるので, *Thyas miniacea sulawesensis* ssp. n. および *Thyas miniacea philippinensis* ssp. n. として記載した. 筆者はまた, スラウェシ産のシタベニコノハ *Thyas honesta* Hübner, 1824 を記録したが, 同地は今まで *T. honesta* の記録も欠く地域であった.

(Accepted December 30, 2003)

Published by the Lepidopterological Society of Japan,
5-20, Motoyokoyama 2, Hachioji, Tokyo, 192-0063 Japan